

To: Phil North/R10/USEPA/US@EPA[]
From: Sarah Gaichas
Sent: Mon 1/4/2010 9:54:36 PM
Subject: Re: Fw: Bristol Bay salmon role in North Pacific

Sure, I'll give you a call, lets say at 5 after to give you time to get clear of your other meeting?
Talk to you tomorrow,
--Sarah

North.Phil@epamail.epa.gov wrote:

> That works for me. If you are in Seattle then yes, it is 11 - 12 your
> time. Will you call me?

>

> Phillip North

> Environmental Protection Agency

> Kenai River Center

> 514 Funny River Road

> Soldotna, Alaska 99669

> (907) 714-2483

> fax 260-5992

> north.phil@epa.gov

>

> "To protect your rivers, protect your mountains."

>

>

>

> From: Sarah Gaichas <Sarah.Gaichas@noaa.gov>

>

> To: Phil North/R10/USEPA/US@EPA

>

> Date: 01/04/2010 12:28 PM

>

> Subject: Re: Fw: Bristol Bay salmon role in North Pacific

>

>

>

>

>

>

> Wednesday works fine for me. Want to talk between 10-11 (your time,

> which I think is between 11 and noon my time)?

> --S

>

> North.Phil@epamail.epa.gov wrote:

>

>> I will be out of the office all day tomorrow. How about Wednesday? I

>> am free except 9:30 - 10 and 11 - 12.

>>

>> Thanks

>>

>> Phillip North

>> Environmental Protection Agency

>> Kenai River Center

>> 514 Funny River Road

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>> fax 260-5992
>> north.phil@epa.gov
>>
>> "To protect your rivers, protect your mountains."
>>
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>
>> From: Sarah Gaichas <Sarah.Gaichas@noaa.gov>
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>
>> To: Phil North/R10/USEPA/US@EPA
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>
>
>> Date: 01/04/2010 11:23 AM
>>
>
>
>
>
>> Subject: Re: Fw: Bristol Bay salmon role in North Pacific
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>
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>>
>>
>> Hi Phil,
>>
>> I'm happy to try and help, but would tomorrow work? I'm teleworking
>> today, dont have access to all of my files, and have a review
>>
> deadline.
>
>> Since this sounds like more of a Bering Sea issue and I am most
>>
> familiar
>
>> with the GOA, it would be good to try to answer you with some Bering
>>
> Sea
>
>> information in front of me.... thats all at the office.
>>
>> Would around 10 am tomorrow work? Or let me know a time that works

>> better. My number is 206 526 4554.
>>
>> Thanks,
>> --Sarah
>>
>> North.Phil@epamail.epa.gov wrote:
>>
>>
>>> Hi Sarah,
>>> Can you help me out? If you send a phone number I'll call and
>>>
> explain
>
>>> my effort. Anything you can offer would be helpful.
>>>
>>> Thanks
>>> Phil
>>>
>>>
>>>
>>> Phillip North
>>> Environmental Protection Agency
>>> Kenai River Center
>>> 514 Funny River Road
>>> Soldotna, Alaska 99669
>>> (907) 714-2483
>>> fax 260-5992
>>> north.phil@epa.gov
>>>
>>> "To protect your rivers, protect your mountains."
>>>
>>>
>>>
>>>
>>>
>>>
>>> From: "Daniel Schindler" <deschind@u.washington.edu>
>>>
>>>
>>
>>
>>
>>> To: <sarah.gaichas@noaa.gov>
>>>
>>>
>>
>>
>>
>>> Cc: Phil North/R10/USEPA/US@EPA
>>>
>>>
>>
>>
>>
>>> Date: 12/31/2009 12:12 PM
>>>

>>>
>>
>>
>>
>>> Subject: Fw: Bristol Bay salmon role in North Pacific
>>>
>>>
>>
>>
>>
>>>
>>> Hi Sarah,
>>> I intended for you to receive this message but mis-typed your email.
>>> Daniel
>>>
>>>
>>> ----- Original Message -----
>>> From: "Daniel Schindler" <deschind@u.washington.edu>
>>> To: <wgpearcy@coas.oregonstate.edu>; <North.Phil@epamail.epa.gov>
>>> Cc: "Kerim Aydin" <Kerim.Aydin@noaa.gov>; <sarah.gachias@noaa.gov>
>>> Sent: Thursday, December 31, 2009 1:07 PM
>>> Subject: Re: Bristol Bay salmon role in North Pacific
>>>
>>>
>>>
>>>
>>>
>>>> Hi Phil,
>>>>
>>>> I suspect that at the scale of fish biomass in the North Pacific, or
>>>>
>>>>
>>>>
>>> even
>>>
>>>
>>>
>>>> Bering and Gulf of AK, that this number will end up being tiny. The
>>>>
>>>>
>>>>
>>> person
>>>
>>>
>>>
>>>> to get in touch with to put your estimate in perspective is Kerim
>>>>
>>>>
>>>>
>>> Aydin at
>>>
>>>
>>>
>>>> the Alaska Fisheries Science Center. His group has developed a bunch
>>>>
>>>>

>>>>
 >>> of
 >>>
 >>>
 >>>
 >>>> Ecosim models for these ecosystems so they should be able to tell
 >>>>
 > you
 >
 >>>>
 >>> who
 >>>
 >>>
 >>>> the main predators for salmon smolts are, and how much of their
 >>>>
 > diets
 >
 >>>>
 >>> are
 >>>
 >>>
 >>>> smolts. Sarah Gachias also works with this group and certainly has
 >>>>
 >>>>
 >> the
 >>
 >>
 >>>> answer as well.
 >>>>
 >>>> Cheers and good luck - all data to show that the Pebble Mine is an
 >>>> environmental (and social) mistake are needed!
 >>>> Daniel
 >>>>
 >>>>
 >>>> ----- Original Message -----
 >>>> From: <North.Phil@epamail.epa.gov>
 >>>> To: <wgpearcy@coas.oregonstate.edu>; <deschind@u.washington.edu>
 >>>> Sent: Thursday, December 31, 2009 9:34 AM
 >>>> Subject: Fw: Bristol Bay salmon role in North Pacific
 >>>>
 >>>>
 >>>>
 >>>>
 >>>>
 >>>>> Bill and Daniel,
 >>>>> As you can see in the message string below Bob Naiman gave me your
 >>>>> names. I am trying to describe the likely consequences of various
 >>>>> scenarios of impact should the Pebble Mine be developed in the
 >>>>>
 >>>>>
 >>>>>
 >>> Bristol
 >>>
 >>>

>>>
 >>>>> Bay watershed. As described below, based on ADFG data and
 >>>>>
 >>>>>
 >>>>>
 >>> assumptions I
 >>>
 >>>
 >>>
 >>>>> have estimated that the Nushagak and Kvichak river systems produced
 >>>>> about 1.6 billion smolts from the 2008 salmon run. About 1.57
 >>>>>
 >>>>>
 >>>>>
 >>> billion
 >>>
 >>>
 >>>
 >>>>> of these fish will not return and so are forage for something in
 >>>>>
 > the
 >
 >>>>> North Pacific and Bering Sea. But I have no sense of the
 >>>>>
 >>>>>
 >>>>>
 >>> significance
 >>>
 >>>
 >>>
 >>>>> of that number of fish in the ocean ecosystem. I am trying to
 >>>>>
 >>>>>
 >> answer
 >>
 >>
 >>>>> the question "If there was a substantial loss from the
 >>>>>
 > out-migration
 >
 >>>>>
 >>> of
 >>>
 >>>
 >>>
 >>>>> Nushagak and Kvichak salmon what would be the effect on the North
 >>>>> Pacific and Bering Sea ecosystem(s)?"
 >>>>>
 >>>>> My background is in fresh water systems. Can you direct me to any
 >>>>> literature that might help answer the question or can you help me
 >>>>>
 >>>>>
 >>>>>
 >>> answer
 >>>
 >>>

>>>
>>>> this question?
>>>>
>>>> Phil
>>>>
>>>>
>>>>
>>>> Phillip North
>>>> Environmental Protection Agency
>>>> Kenai River Center
>>>> 514 Funny River Road
>>>> Soldotna, Alaska 99669
>>>> (907) 714-2483
>>>> fax 260-5992
>>>> north.phil@epa.gov
>>>>
>>>> "To protect your rivers, protect your mountains."
>>>> ----- Forwarded by Phil North/R10/USEPA/US on 12/31/2009 08:18 AM
>>>>
>>>>
>>>>
>>> -----
>>>
>>>
>>>
>>>> From: "Robert J. Naiman" <naiman@uw.edu>
>>>>
>>>> To: Phil North/R10/USEPA/US@EPA
>>>>
>>>> Date: 12/31/2009 06:20 AM
>>>>
>>>> Subject: Re: Bristol Bay salmon role in North Pacific
>>>>
>>>>
>>>>
>>>>
>>>>
>>>>
>>>> Phil,
>>>>
>>>> You might try contacting Bill Pearcy (Oregon State University;
>>>> <wgpearcy@coas.oregonstate.edu>) or Daniel Schindler (UW;
>>>> <deschind@u.washington.edu>). If they cannot help then I suspect
>>>>
>>>>
>>>>
>>> that
>>>
>>>
>>>
>>>> they will know someone who can.
>>>>
>>>> I hope your project goes well as there is a lot riding on the
>>>> development of the mine.
>>>>
>>>> Cheers, Bob

[illegible]

>>>
 >>>
 >>>>> so I estimated the number of smolts produced by the Nushagak and
 >>>>>
 >>>>>
 >>>>>
 >>>> Kvichak
 >>>>
 >>>>
 >>>>
 >>>>> Rivers. I am not aware of any monitoring of smolts so I employed
 >>>>> assumptions and estimates used by ADFG to manage the fishery. I
 >>>>> projected that, based on 2008 escapement estimates (28 million)
 >>>>>
 > and
 >
 >>>>> smolt survival assumptions (10%), these two watersheds produced
 >>>>>
 > 1.6
 >
 >>>>> billion smolts.
 >>>>>
 >>>>> This seems like a big number. But now I am trying to figure out
 >>>>>
 >>>>>
 >>>>>
 >>> what
 >>>
 >>>
 >>>
 >>>>> this number means to the North Pacific ecosystem (including the
 >>>>>
 >>>>>
 >>>>>
 >>> Bering
 >>>
 >>>
 >>>
 >>>>> Sea). I don't know how this number of fish relates to the overall
 >>>>> population of "forage fish". In turn I don't know the
 >>>>>
 > consequences
 >
 >>>>>
 >>> of
 >>>
 >>>
 >>>
 >>>>> a
 >>>>>
 >>>>>
 >>>>>
 >>>>> reduction of this number of fish migrating to food webs in the
 >>>>>
 >>>>>
 >> North

[illegible]